Abstract

Fuzzy Logic based Intelligent Load Control for Multi-Application/Process Multimedia&Telecommunication Systems

A load control system for a Multi-Application/Process Multimedia&Telecommunication System is disclosed. A typical Internet Services Server does not provide any support to limit the rate of connections per second and/or the rate of requests per second to dynamically adapt to server load and/or satisfy a policy constraint on service guarantees. As a result, it is likely for an Internet Services Server to become saturated (overloaded) when servicing content to clients. In an overloaded condition, a typical server suffers severe performance degradation, with the overall throughput falling significantly and client connectivity and perceived performance such as the delay in completing the request) becoming unpredictable. The invention solves these problems by a mechanism which is based on the use of a fuzzy logic expert system. The fuzzy logic expert system computes in a first step (NOM, Normal OperationMode) an overload level (load monitoring and overload detection) for the system according to the monitored resources (like CPU, memory, Ios, queues...) and to a predefined fuzzy logic rule-based scenario. If a defined overload level is reached, then the FLEXSYS (Fuzzy Logic EXpert SYStem) computes in a second step (OOM, Overload Operation Mode) which overload handling actions (overload handling) have to be taken (according to a second FLEXSYS scenario).

Fig. 1